FAILURE MODE EFFECTS ANALYSIS/CRITICAL ITEMS LIST

MEA NUMBER: EDFT-05-PORT7-2	ORIGINATOR: JSC	PROJECT: DTO 671
PART NAME: OTD LATCH ASSEMBLY	LRU PART NUMBER: SED39128567-401	QUANTITY: 4
PART NUMBER: SED39128598-301, 39128599-301, 39128600-301, 39128601-301	LRU PART NAME: BAY 7 PORT INSTALLATION	SYSTEM: EDFT-05
DRAWING: SEE P/N	SUBSYSTEM: N/A	EFFECTIVITY: STS-80

CRITICALITY:

CRITICAL ITEM? YES X NO ____

CRITICALITY CATEGORY: 1R/3

REDUNDANCY SCREENS:

A - Pass
B - N/A
C - Pass

FUNCTION: Four OTD latch assemblies secure the OTD for launch and landing. Each latch assembly is 2-fault tolerant for inadvertent opening (2 redundant springs and a ball detent locking pin).

FAILURE MODE: Unable to close latch

CAUSE: Spring failure, piece part failure, contamination, galling

FAILURE DETECTION: Visual

REMAINING PATHS: TWO - The closed latch located on the same side of the transition plate centerline as the failed latch, and jettison.

EFFECT/MISSION PHASE: EVA, Landing

CORRECTIVE ACTION: Latches 1 and 3 or latches 1 and 4 or latches 2 and 3 or latches 2 and 4 must be engaged to ensure structural integrity during landing. Jettison OTD if necessary latches cannot be closed.

-FAILURE EFFECTS-

END ITEM: One failure - no effect. Remaining latches will keep OTD restrained. Open latch will be restrained so that it does not impact surrounding items.

INTERFACE: N/A

MISSION: None.

CREW/VEHICLE: None for single failure. Possible impact damage to vehicle after multiple failures.

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HAZARD INFORMATION:

HAZARD: YES ____ NO X

HAZARD ORGANIZATION CODE:

HAZARD NUMBER: N/A

TIME TO EFFECT: Hours

TIME TO DETECT: Seconds

TIME TO CORRECT: Minutes

REMARKS:

-RETENTION RATIONALE-

(A) DESIGN:

(B) TEST:

(C) INSPECTION:

(D) FAILURE HISTORY:

(E) OPERATIONAL USE

PREPARED BY: Murray Epstein REVISION: DATE: 4/23/96